

**ABSTRACT:**

At least one quantity which is characteristic of the temperature-dependent magnetic properties of magnetizable material which interacts with the magnetic fields of a magnetic resonance imaging device is determined in order to compensate the temporally varying strength of the main magnetic field of a main magnet of such a device. On the basis of  
5 this quantity a compensation signal is formed for the correction of the influence of the varying field strength on the imaging result.

Fig. 2